DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 08/13/08 after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/13/08 has been entered.

2. Claims 1, 4-8, 10-15, 18, 20, 21, 23, 24, 26-29 are pending. Claims 2, 3, 9, 16, 17, 19, 22, and 25 are cancelled. Claims 7, 10-12, 20, and 21 are withdrawn. Support for the newly amended claims is found in the specification as originally filled.

3. The 35 USC Section 102(b)/103(a) rejections based on Flam (US 3,661,142) to claims 1, 5,and 6 are withdrawn, because Flam does not teach or suggest that the film substrate comprises an aliphatic polyester or a polycarprolactone as claimed. However, the aforementioned rejection to claim 23 and 26 are maintained.

4. Similarly, the 35 USC Section 102(b) or 103(a) rejections based on Yutaka et al. (Machine translation of Abstract and Detailed Description of JP 2001-247828) to claim 1 are withdrawn, because Yutaka does not teach or suggest that the film substrate comprises an aliphatic polyester or a polycarprolactone as claimed. However, the aforementioned rejections to claim 23 are maintained. Additionally, the Examiner is providing a complete English translation of Yutaka reference.

5. The 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) are maintained.

6. Similarly, the 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A), and further in view of Kreckel et al. (US 5,516,581) are maintained.

7. The Examiner is providing an English translation of Matveev et al. (SU 717201).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 23 and 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Flam (US 3,661,142).

9. Flam teaches a temperature sensitive patch comprising a flexible backing having a pressure-sensitive adhesive (PSA) coated on one side of the tape backing (equated to Applicant's adhesive tape) and a plurality of color responsive indicators (equated to Applicant's temperature-indicating material) adhered on the other side thereof (abstract). Each of the indicators of Flam displays a color change spectrum according to temperature changes within a different predetermined temperature range (column 2

lines 11-18). Further, the PSA of Flam includes rubber based and acrylate adhesives (column 2 lines 74-75).

10. Given that Flam teaches what has been set forth above, it respectfully submitted that it is reasonable to presume that the properties of a the adhesive tape being thermally activable removable, a film substrate having an elastic modulus at a temperature below an activation temperature, an elastic modulus at a temperature exceeding the activation temperature, an elongation at break at a temperature exceeding the activation temperature, and color-changing temperature is equal to or greater than the activation temperature as claimed would be present in the invention of Flam.

11. The support for said presumption is based on the fact that the adhesive tapes of both inventions i.e. that of Applicant and Flam comprise a film substrate and an adhesive layer disposed on at least one surface of the film surface. Additionally, a temperature-indicating material is disposed on the film substrates of Flam and Applicant. Moreover, the film substrates of Flam and that of Applicant comprise PET (see column 2 line 45 of Flam and paragraph 0021 of US Patent Application Publication 2006/0188706A1 of the present application). Thus, the adhesive tapes including the film substrates of Flam and Applicant are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present. The burden is shifted to Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). In addition, the presently claimed properties would obviously have been present once the

product of Flam is provided (see *In re Best*, 195 USPQ at 433, footnote 4 CCPA 1977). Accordingly, Flam anticipates or strongly suggests the presently claimed invention.

12. Claim 23 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yutaka et al. (English translation of JP 2001-247828 currently provided).

13. Yutaka discloses a reversible temperature sensitive color changing PSA tape (abstract). The PSA tape of Yutaka comprises a reversible temperature sensitive color changing tape substrate, wherein a specific reversible thermochromic pigment is fixedly dispersed in the tape substrate and a PSA layer is laminated on one side of the tape substrate (abstract). Additionally, the invention of Yutaka relates to a reversible heat-sensitive color-developing adhesive tape with a function which allows temperature changes to be readily perceived by the color changes of the tape (0001).

14. Given that Yutaka teaches what has been set forth above, it is respectfully submitted that the claimed properties of the adhesive tape being thermally activable removable, a film substrate having an elastic modulus at a temperature below an activation temperature, an elastic modulus at a temperature exceeding the activation temperature, an elongation at break at a temperature exceeding the activation temperature, and color-changing temperature is equal to or greater than the activation temperature as claimed would be present in the invention of Yutaka.

15. The support for said presumption is based on the fact that the adhesive tapes of both inventions i.e. that of Applicant and Yutaka comprise a film substrate and an

adhesive layer disposed on at least one surface of the film surface. Additionally, a temperature-indicating material is disposed within the film substrates of Yutaka and Applicant. Moreover, the film substrates of Yutaka and that of Applicant are formed of PET (see 0005 of Yutaka and paragraph 0021 of US Patent Application Publication 2006/0188706A1 of the present application). Thus, the adhesive tapes including the film substrates of Yutaka and Applicant are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present. The burden is upon Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). In addition, the presently claimed properties would obviously have been present once the product of Yutaka is provided (see *In re Best*, 195 USPQ at 433, footnote 4 CCPA 1977). Accordingly, Yutaka anticipates or strongly suggests the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 1, 5, 6, 8, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A). US 2004/0067331A1 to Kuckertz et al. is relied upon as an equivalent for convenience.

17. The invention of Flam is previously disclosed and it is incorporated here by reference.

18. Flam is silent with respect to teaching the film substrate comprising aliphatic polyester or a polycaprolactone.

19. However, Kuckertz discloses biodegradable tear-off strips for biodegradable packaging materials, comprising a backing film comprising biodegradable aliphatic polyester and/or copolyester (abstract and 0016) and an adhesive layer applied to the backing film (0018). At paragraph 0008-0009, Kuckertz discloses that use of biodegradable materials is desirable because ordinary packaging materials generate waste. Further, the biodegradable backing films of Kuckertz meets the high mechanical requirements that are placed upon tear-off strips (0015).

20. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the backing film comprising aliphatic polyester as taught by Kuckertz in the invention of Flam, motivated by the desire to provide biodegradability to the PSA coated patch of Flam, such that when such a patch is discarded by the user, it will biodegrade and generate less waste.

21. With respect to claimed properties of the adhesive tape being thermally activable removable, a film substrate having an elastic modulus at a temperature below an activation temperature, an elastic modulus at a temperature exceeding the activation temperature, an elongation at break at a temperature exceeding the activation temperature, and color-changing temperature is equal to or greater than the activation

temperature, it is reasonable to presume that these properties would be present in the adhesive tape of Flam as modified by Kuckertz.

22. The support for said presumption is based on the fact that the adhesive tapes of Flam as modified by Kuckertz and that of Applicant comprise a film substrate wherein the film substrate comprises aliphatic polyester and a first adhesive layer is disposed on the film substrate. Thus, the adhesive tapes of Applicant and that of Flam as modified by Kuckertz are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present in the adhesive tape of Flam as modified by Kuckertz. The burden is upon Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594).

23. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) as applied to claim 23, and further in view of Matveev et al. (Abstract and English translation of SU 717201A).

24. The Invention of Flam is previously disclosed. Flam is silent with respect to teaching wherein the temperature indicating material comprises a higher fatty acid ester.

25. However, Matveev discloses a paper strip consisting of paper base with coating formed of a thermo-sensitive substance, a binder, a pigment and a solvent. The invention of Matveev includes heat indicators that allows for the registration of a temperature as a result of a visible change in the composition of a coating containing

such heat indicators. Further, as a thermosensitive substance esters of stearic acid (higher fatty acid ester) are used (see abstract and page 1).

26. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a temperature-indicating material such as higher fatty acid ester in the invention of Flam, motivated by the desire to form the temperature sensitive patch of Flam.

27. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) as applied to claims 1, 8, and 13, and further in view of Matveev et al. (Abstract and English translation of SU 717201A).

28. The invention of Flam as modified by Kuckertz is previously disclosed and it is incorporated here by reference. Flam as modified by Kuckertz is silent with respect to teaching wherein the temperature indicating material comprises a higher fatty acid ester.

29. However, the invention of Matveev is previously disclosed and it is incorporated here by reference.

30. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a temperature-indicating material such as higher fatty acid ester in the invention of Flam, motivated by the desire to form the temperature sensitive patch of Flam.

31. Claims 18, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) as applied to claim 8, and further in view of Kreckel et al. (US 5,516,581).

32. With respect to the independent claim 27, it is noted that this claim is a combination of claims 8 and 18. Thus, the invention of Flam as modified by Kuckertz as set forth previously in this Office Action is equally applicable to claim limitations of "A thermally activable removable adhesive tape comprising…a temperature-indicating material disposed…a color-changing temperature".

33. Flam is silent with respect to teaching the adhesive tape further comprising a foam layer.

34. However, Kreckel discloses a removable adhesive tape comprising a backing layer and a layer of PSA (abstract). The adhesive tape of Kreckel can be firmly adhered to a substrate and can be removed without damaging the substrate. Additionally, the tape backing of Kreckel comprises a second layer of foam (see claim 19).

35. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a foam layer in the adhesive tape, motivated by the desired to enhance the strength of the backing and the adhesive tape and such a backing would not rupture prior to the removal of a tape from a substrate.

36. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) and Kreckel et al. (US 5,516,581) as applied to claim 27, and further in view of Matveev et al. (Abstract and English translation of SU 717201A).

37. The invention of Flam is previously disclosed. Flam is silent as to teaching "wherein the temperature-indicating material comprises…cobalt…iron…or a combination thereof." as claimed. However, the invention of Matveev is previously disclosed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a temperature-indicating material such as higher fatty acid ester in the invention of Flam, motivated by the desire to form the temperature sensitive patch of Flam.

Response to Arguments

38. Applicant's arguments filed on 07/28/08 have been fully considered but they are not persuasive.

39. With respect to the 35 USC Section 102(b)/103(a) rejections based on Flam (US 3,661,142) as applied to claim 23, Applicant argues that Flam does not teach or suggest a thermally activable removable adhesive tape having a temperature indicating material which experiences a color change when exposed to a color-changing temperature equal to or greater than the activation temperature. Further, Applicant argues that Flam does not disclose a film substrate having an elastic modulus and elongation at break properties as claimed; instead Flam teaches polyethylene terephthalate as a flexible

backing web and is silent on the relationship of the web to the elastic modulus and elongation at break properties.

40. The Examiner respectfully disagrees for the following reasons:

41. It is noted that the temperature sensitive adhesive patch of Flam comprise a flexible backing that is formed of same material as that is disclosed by Applicant; namely polyethylene terephthalate (PET), polyvinyl chloride (PVC) etc. (see column 2 lines 35-50 of Flam and 0021 of US Patent Application Publication 2006/0188706A1 of the present application). Based on this evidence, the substrates of Flam and that of Applicant are formed of same material. Therefore, the substrate of Flam would necessarily have the elastic modulus and elongation at break properties as presently claimed because "Products of identical chemical composition can not have mutually exclusive properties." (see *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990).

42. Additionally, as to the arguments that Flam does not teach or suggest a temperature-indicating material that changes color when exposed to a color-changing temperature equal to or greater than the activation temperature, these arguments are not found persuasive because Flam discloses that his adhesive patch contains temperature-sensitive indicators that change color in response to temperature change within a predetermined temperature range (abstract). Further, at column 3 lines 35-45, Flam discloses that the temperature-sensitive color-responsive indicators of his/her invention can be tailored, for example, to change color at difference temperature in the range of 20°C to 250°C. It is noted that Applicant's activation temperature is in the

range of from greater than 25°C to less than 75°C (see claim 23). Therefore, to the Examiner the aforementioned feature of the temperature indicating material that changes color when exposed to a color-changing temperature equal to or greater than the activation temperature would be present in the invention of Flam.

43. As to the arguments that Flam does not teach or suggest thermally activable removable tape, it is respectfully submitted that the adhesive tapes of Flam and Applicant comprise a film substrate having an adhesive layer disposed on the film substrate. Additionally, as previously noted the film substrates of Flam and Applicant are formed of same material e.g. PET. Further, the adhesive tapes of Flam and Applicant comprise a temperature-indication material disposed on the film substrate. Based on this evidence, it is respectfully submitted that the adhesive tapes of Flam and Applicant are structurally and compositionally equivalent. Thus, the feature of adhesive tape being thermally activable removable would be present in the invention of Flam. The burden is shifted to Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). Accordingly, the art rejections are sustained.

44. With respect to the 35 USC Section 102(b)/103(a) rejections based on Yutaka et al. (JP 2001-247828) as applied to claim 23, Applicant argues that Yutaka does not teach or suggest a thermally activable removable adhesive tape comprising a temperature-indicating material which when exposed to a color-changing temperature equal to or greater than the activation temperature of the film substrate changes color. Yutaka does not disclose the film substrate having an elastic modulus and elongation at

break properties as claimed. The Examiner respectfully disagrees for the following reasons:

45. It is respectfully submitted that Yutaka discloses a reversible heat-sensitive color-developing tape which consists of a reversible heat-sensitive color-developing substrate containing a microencapsulated reversible thermochromic pigment (see page 2, claim 1 of English translation provided). Further, Yutaka discloses the thermochromic pigments (equated to Applicant's temperature-indicating material) change the color at a predefined temperature (color-change point) (see page 10 of English translation provided). Applicant's adhesive tape also includes a temperature-indication material. Further Applicant's claimed invention merely requires a presence of a temperature-indicating material without setting forth any particular composition of the temperature-indicating material. To the Examiner the temperature-indicating material (thermochromic pigment) of Yutaka and Applicant are similar. Therefore, the thermochromic pigment of Yutaka is functionally capable of changing the color when exposed to the color-changing temperature equal to or greater than the activation temperature as claimed.

46. As to Applicant's arguments that Yutaka does not disclose the film substrate having an elastic modulus and elongation at break properties as claimed, these arguments are not found persuasive for the following reasons:

47. It is respectfully submitted that the film substrates of Yutaka and that of Applicant are formed of same material; namely PET, PVC etc. (see page 8 of English translation of Yutaka and 0021 of US Patent Application Publication 2006/0188706A1 of the

present application). Therefore, the substrate of Flam would necessarily have the elastic modulus and elongation at break properties as presently claimed because "Products of identical chemical composition can not have mutually exclusive properties." (see *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.1990).

48. As to Applicant's arguments that Yutaka does not teach or suggest thermally activable removable adhesive tape, it is respectfully submitted that the adhesive tapes of Yutaka and Applicant comprise a film substrate (e.g. PET or PVC) having an adhesive layer disposed on at least one surface of the film substrate. Further, a temperature-indicating material is disposed within the film substrate of Yutaka. Based on this evidence, the adhesive tapes of Yutaka and Applicant are structurally and compositionally equivalent. Thus, the feature of adhesive tape being thermally activable removable would be present in the invention of Yutaka. The burden is shifted to Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594). Accordingly, the art rejections are sustained.

49. With respect to the 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Kuckertz (WO 02/136702A), Applicant argues Kuckertz does not teach or suggest a thermally activable removable adhesive tape of claims 1 or 8. Additionally, Applicant argues that Kuckertz does not teach or suggest a temperature indicating material of the thermally activable removable adhesive tape experiencing a color change when exposed to a color changing temperature, and having a film

substrate comprising an aliphatic polyester or caprolactam. The Examiner respectfully disagrees for the following reasons:

50. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is respectfully submitted that the reference of Kuckertz is only relied upon to show why it would have been obvious to select aliphatic polyester such as that of claimed by Applicant. Accordingly, Applicant's arguments are not found persuasive.

51. It is noted that with regards to the rejections set forth below, Applicant has essentially incorporated same arguments as set forth previously. Thus, in response the Examiner is incorporating his rebuttal set forth above by reference. These rejections are as follows: the 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Matveev et al. (SU 717201A) and the 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) and Matveev et al. (SU 717201A).

52. With respect to the 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A), and Kreckel et al. (US 5,516,581), Applicant argues that Flam is silent as to teaching of the foam layer.

Kreckel does not teach or suggest a thermally activable removable tape as claimed. The Examiner respectfully disagrees for the following reasons:

53. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is respectfully submitted that the reference of Kreckel is only relied upon to show why it would have been obvious to use a foam layer as claimed by Applicant. Accordingly, Applicant's arguments are not found persuasive

54. With respect to the 35 USC Section 103(a) rejections based on Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A), Kreckel et al. (US 5,516,581), and Matveev et al. (SU 717201A), it is noted that in response to this rejection, Applicant has essentially incorporated his/her arguments as set forth previously. In response, the Examiner is respectfully incorporating his rebuttal as set forth previously in this Office Action by reference.

Conclusion

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

56. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

57. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Hai Vo/
Primary Examiner, Art Unit 1794